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EXAMINER

WASSUM, LUKE S

ART UNIT PAPER NUMBER

2167

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/080,945

Applicant(s)

CHANG ET AL.

Examiner

Luke S. Wassum

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7 July 2005 has been entered.

### ***Response to Preliminary Amendment***

2. The Applicants' preliminary amendment, filed 7 July 2005, has been received, entered into the record, and considered.

3. As a result of the preliminary amendment, claims 1, 5, 13, 14, 17 and 19 have been amended. Claim 2 has been previously canceled. Claims 1 and 3-20 remain pending in the application.

### ***The Invention***

4. The claimed invention is a method of document retrieval including assigning concept labels to documents contained in a collection according to grammar rules, receiving a query, converting the query to a query concept using the grammar rules, and mapping the query concept to a concept label.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1 and 3-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

7. Regarding independent claims 1, 13, 17 and 19, these claims contain limitations including pre-assigning concept labels based upon a grammar, and then generating a grammar based upon the concept labels, this 'generated' grammar used subsequently to convert a user query to a query concept. The use of two different grammars, one used to pre-assign concept labels, and a different one used to convert a user-entered query to a query concept, is neither disclosed nor described in the specification.

8. Claims 3-12, 14-16, 18 and 20, fully incorporating the deficiencies of their respective parent claims, are likewise rejected.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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10. Claims 1 and 3-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Regarding independent claims 1, 13, 17 and 19, these claims contain limitations including pre-assigning concept labels based upon a grammar, and then generating a grammar based upon the concept labels, this 'generated' grammar used subsequently to convert a user query to a query concept. The fact that concept labels are assigned based on a grammar, said concept labels then being utilized to generate a grammar, represents circular logic that renders the claims indefinite. If a grammar is used to assign concept labels to documents, then that same grammar would obviously be most suited for application to user queries in order to match query to documents. Labeling documents based on a grammar, and then using the resulting labels to generate a grammar, would necessarily result in the same or analogous grammar.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1, 3, 4, 8-10 and 13-20 are rejected under 35 U.S.C. 102(b) as being anticipated by **Wical** (U.S. Patent 6,038,560).

14. Regarding claim 1, **Wical** teaches a computer-implemented method of retrieving information comprising:

- a) pre-assigning concept labels to documents contained in a collection, pre-assigning including parsing the documents automatically with a grammar (see disclosure that the content processing system processes a plurality of documents to identify themes and classifies the documents in categories in the knowledge base; see also disclosure of theme vectors, col. 6, line 34 through col. 7, line 2; see also col. 8, lines 1-11; see also extensive disclosure of the content processing system, col. 27, line 14 through col. 29, line 30);
- b) generating a grammar around the concept labels (see disclosure that the knowledge base, analogous to the claimed grammar and grammar rules, links terminology having, *inter alia*, a usage association, meaning that the association is based upon the actual usage of the terms in documents, thus rendering inherent the generation of the grammar/knowledge base, based upon the actual usage of terms in documents, col. 2, lines 45-48; see also col. 9, lines 44-46);
- c) applying the generated grammar to a query to convert the query to a query concept (see col. 8, lines 14-15; see also disclosure of the identification of terminology having lexical, semantic or usage association with the query terms, col. 9, lines 34-53; see also identification of corresponding themes, col. 9, line 64 through col. 10, line 4); and
- d) mapping the query concept to a concept label (see disclosure of identification of a category associated with query theme, col. 10, lines 1-4; see also col. 17, lines 27-61).

15. Regarding claim 13, **Wical** teaches a computer-implemented method of document retrieval as claimed, comprising:

- a) pre-assigning concept labels to documents contained in a collection according to grammar rules (see disclosure that the content processing system processes a plurality of documents to identify themes and classifies the documents in categories in the knowledge base; see also disclosure of theme vectors, col. 6, line 34 through col. 7, line 2; see also col. 8, lines 1-11; see col. 27, line 14 through col. 28, line 24 for disclosure of grammar rules);
- b) generating a grammar around the concept labels (see disclosure that the knowledge base, analogous to the claimed grammar and grammar rules, links terminology having, *inter alia*, a usage association, meaning that the association is based upon the actual usage of the terms in documents, thus rendering inherent the generation of the grammar/knowledge base, based upon the actual usage of terms in documents, col. 2, lines 45-48; see also col. 9, lines 44-46);
- c) applying the generated grammar to a query to convert the query to a query concept (see col. 8, lines 14-15; see also disclosure of the identification of terminology having lexical, semantic or usage association with the query terms, col. 9, lines 34-53; see also identification of corresponding themes, col. 9, line 64 through col. 10, line 4); and
- d) mapping the query concept to a concept label (see disclosure of identification of a category associated with query theme, col. 10, lines 1-4; see also col. 17, lines 27-61).

16. Regarding claim 17, **Wical** teaches a computer program residing on a computer-readable medium as claimed, comprising instructions for causing a processor to:

- a) pre-assign concept labels to documents contained in a collection according to grammar rules (see disclosure that the content processing system processes a plurality of documents to identify themes and classifies the documents in categories in the knowledge base; see also disclosure of theme vectors, col. 6, line 34 through col. 7, line 2; see also col. 8, lines 1-11);
- b) generate a grammar around the concept labels (see disclosure that the knowledge base, analogous to the claimed grammar and grammar rules, links terminology having, *inter alia*, a usage association, meaning that the association is based upon the actual usage of the terms in documents, thus rendering inherent the generation of the grammar/knowledge base, based upon the actual usage of terms in documents, col. 2, lines 45-48; see also col. 9, lines 44-46);
- c) apply the generated grammar to a query to convert the query to a query concept (see col. 8, lines 14-15; see also disclosure of the identification of terminology having lexical, semantic or usage association with the query terms, col. 9, lines 34-53; see also identification of corresponding themes, col. 9, line 64 through col. 10, line 4); and
- d) map the query concept to a concept label (see disclosure of identification of a category associated with query theme, col. 10, lines 1-4; see also col. 17, lines 27-61).

17. Regarding claim 19, **Wical** teaches a computer program residing on a computer-readable medium as claimed, comprising instructions for causing a processor to:

- a) pre-assign concept labels to documents contained in a collection according to grammar rules (see disclosure that the content processing system processes a plurality of documents to identify themes and classifies the documents in categories in the knowledge base; see also disclosure of theme vectors, col. 6, line 34 through col. 7, line 2; see also col. 8, lines 1-11; see col. 27, line 14 through col. 28, line 24 for disclosure of grammar rules);
- b) generate a grammar around the concept labels (see disclosure that the knowledge base, analogous to the claimed grammar and grammar rules, links terminology having, *inter alia*, a usage association, meaning that the association is based upon the actual usage of the terms in documents, thus rendering inherent the generation of the grammar/knowledge base, based upon the actual usage of terms in documents, col. 2, lines 45-48; see also col. 9, lines 44-46);
- c) apply the generated grammar to a query to convert the query to a query concept (see col. 8, lines 14-15; see also disclosure of the identification of terminology having lexical, semantic or usage association with the query terms, col. 9, lines 34-53; see also identification of corresponding themes, col. 9, line 64 through col. 10, line 4); and
- d) map the query concept to a concept label (see disclosure of identification of a category associated with query theme, col. 10, lines 1-4; see also col. 17, lines 27-61).

18. Regarding claim 14, **Wical** additionally teaches a method in which pre-assigning comprises parsing the documents automatically with grammar rules (see col. 27, line 14 through col. 28, line 24 for disclosure of grammar rules).

19. Regarding claim 3, **Wical** additionally teaches a method in which the concept label represents a general notion (see disclosure of identification of a category associated with query theme, col. 10, lines 1-4; see also col. 17, lines 27-61).

20. Regarding claims 4 and 15, **Wical** additionally teaches a method in which the query is a text query received from a user (see col. 1, lines 11-25).

21. Regarding claim 8, **Wical** additionally teaches a method in which converting comprises applying a store of grammar rules to the query (see col. 13, lines 7-23; see also col. 27, line 14 through col. 28, line 24 for a more specific disclosure of grammar rules).

22. Regarding claim 9, **Wical** additionally teaches a method in which the grammar rules map text to concepts (see col. 13, lines 7-23; see also col. 27, line 14 through col. 28, line 24 for a more specific disclosure of grammar rules).

23. Regarding claims 10, 16, 18 and 20, **Wical** additionally teaches a method and computer program further comprising instructions for causing a processor to:

- a) generate a list of the mapped query concepts (see Figures 10A and 10B; see also col. 9, lines 21-32; see also col. 13, lines 24-32); and
- b) display the list to a user on an input/output device (see Figures 10A and 10B; see also col. 9, lines 21-32; see also col. 13, lines 24-32).

***Claim Rejections - 35 USC § 103***

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

26. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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27. Claims 5-7, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wical** (U.S. Patent 6,038,560) as applied to claims 1, 3, 4, 8-10 and 13-20 above, and further in view of **Braden-Harder et al.** (U.S. Patent 5,933,822).

28. Regarding claim 5, **Wical** teaches a method substantially as claimed.

**Wical** does not explicitly teach a method wherein the assignment of concept labels is performed by spidering the Internet and storing the location of discovered documents.

**Braden-Harder et al.**, however, teaches a method wherein the assignment of concept labels is performed by spidering the Internet and storing the location of discovered documents (see col. 1, line 49 through col. 2, line 30).

It would have been obvious to one of ordinary skill in the art at the time of the invention to spider the Internet to record a mapping of document features to concepts and document locations, since the Internet comprises a source of valuable information that is larger than any single conventional database (see col. 1, lines 36-48) and using this technique would significantly ease the task of retrieving information from the Internet (see col. 1, lines 49-52).

29. Regarding claim 6, **Braden-Harder et al.** additionally teaches a method wherein the documents are HyperText Markup Language (HTML) files (see disclosure of crawlers indexing the Internet, including HTML documents, col. 1, line 49 through col. 2, line 30).

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30. Regarding claim 7, **Braden-Harder et al.** additionally teaches a method wherein the document location indicators are Universal Resource Identifiers (see disclosure that the document records typically include the URL associated with the document, col. 1, line 66 through col. 2, line 5).

31. Regarding claim 11, **Wical** teaches a method substantially as claimed.

**Wical** does not explicitly teach a method wherein the list of documents represents locations of documents, although the fact that documents could be retrieved via a network from a remote location is taught at col. 5, lines 35-41, which implies the storage of the claimed location information.

**Braden-Harder et al.**, however, teaches a method wherein the list of documents represents locations of documents (see disclosure that the document records typically include the URL associated with the document, col. 1, line 66 through col. 2, line 5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to maintain the location of documents, since the Internet comprises a source of valuable information that is larger than any single conventional database (see col. 1, lines 36-48), and retrieval of information from the Internet requires the maintenance of location information.

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32. Regarding claim 12, **Braden-Harder et al.** additionally teaches a method wherein the locations are Universal Resource Identifiers (see disclosure that the document records typically include the URL associated with the document, col. 1, line 66 through col. 2, line 5).

### ***Response to Arguments***

33. Applicant's arguments filed 7 July 2005 have been fully considered but they are not persuasive.

34. Regarding the Applicants' argument that the prior art of record fails to teach the new limitation including pre-assigning concept labels based upon a grammar, and then generating a grammar based upon the concept labels, this 'generated' grammar used subsequently to convert a user query to a query concept, the examiner respectfully disagrees.

In addition to the issues raised regarding U.S.C. § 112, detailed above, the examiner points out that the **Wical** reference teaches a knowledge base, analogous to the claimed grammar, containing terminology having lexical, semantic or usage association, organized into themes and categories. Any usage-based association would necessarily anticipate the claimed new limitations, in that usage-based associations are derived from the actual usage of said terms in categorized documents.

The rejection of record is maintained.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke S. Wassum whose telephone number is 571-272-4119. The examiner can normally be reached on Monday-Friday 8:30-5:30, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

In addition, INFORMAL or DRAFT communications may be faxed directly to the examiner at 571-273-4119. Such communications must be clearly marked as INFORMAL, DRAFT or UNOFFICIAL.

Customer Service for Tech Center 2100 can be reached during regular business hours at (571) 272-2100, or fax (571) 273-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Luke S. Wassum  
Primary Examiner  
Art Unit 2167